Reality is an ever-transmutable energy, and with this conception the contradiction between materialism and idealism is got rid of.

The book is well written, and contains much sound analysis of perception and the like, with much that is debatable but suggestive and stimulating.

(2) Lectures delivered by the author at the Crane Technical High School, Chicago, in his department as instructor in ethics; the volume is Book I. in a four-years' course which he is working out. It is not a text-book of "ethics" as we understand the word over here, but a series of moral lessons aiming at the improving of character rather than the imparting of knowledge concerning a science. They are admirably arranged, and deal with honesty, industry, earnestness, obedience, courtesy, self-control, sport and its cruelties, &c. Suitable anecdotes are introduced, and the style is breezy and interesting. It is to be hoped that many schools will use this pioneer volume as a manual. As Mr. Moore remarks, we have scarcely yet begun to educate the human young. When we become enlightened, we shall not consider when a new being comes into the world that the first and most important thing to do is to pounce upon him and teach him to read and write. The art of putting oneself in the place of others is a more important art, and the inculcation of this is a more important anxiety in child education than the art of reading and writing. It is noteworthy that the Illinois legislature passed a law three years ago requiring the teaching of morals and humanity in all the public schools of the State for thirty minutes every week. Illinois was the fourteenth State to adopt such a law.

(3) Mr. Harrison is always readable, and this collection of essays and discourses will serve as a useful popular compendium of Positivist doctrine. It suffers in places from a certain garrulity, and also the reader occasionally feels that the author is laboriously slaying the slain—as when he refutes "orthodox criticism," with its "scheme of personal salvation" and its "Almighty, Absolute, incomprehensible God." And, in view of the parade of "science" and "logic," he is rather dogmatic, though at the same time vague and general—*e.g.* "there can be little doubt that the average Orthodox Dissenter is far inferior in learning, culture, and breadth of view and nature to the average Churchman" (p. 171). These hasty personal judgments are injudicious, and, besides, such phrases as "average Orthodox Dissenter" and "average Churchman" are too vague to be of much use. It may even be doubted whether Mr. Harrison knows much about Dissent, for he speaks of some unnamed publication as the "authoritative organ of Orthodox Nonconformity" (p. 207). No such publication exists. Most of the greater dissenting sects have their own organ, but no one of these speaks for all. And, indeed, what *is* "Orthodox Nonconformity?" On the question of miracles, Mr. Harrison uses the antiquated phrase "suspension of the laws of nature," and talks of "violation" quite in the style of Hume. Surely after Mill and Huxley this language ought not to be used. With Mr. Harrison's agnosticism about a "Creator," and his emphasis on social effort and character-building, probably most scientific readers will heartily agree.

(4) After Mr. Harrison's relegation of metaphysics and absolutes to the lumber-room of outworn things comes Dr. Bosanquet's "truth which for us is now established, of the reality and perfection of the Absolute" (p. 260). No doubt they will read each other's books—or perhaps they will not—and will remain of the same opinion still. But there is a great difference between the two, in the eyes of what Mr. Harrison would probably call an "average reader." The one is a *littérateur*, the other is a thinker and philosopher. We have no space for an adequate review of Dr. Bosanquet's book (which embodies the Gifford lectures for 1911–1912), and must content ourselves with saying that the title well describes the contents, and that the author's view of time seems more satisfactory than that of Bergson, which he criticises.

OUR BOOKSHELF.

Plant Diseases. By Dr. Werner F. Bruck. Translated by Prof. J. R. Ainsworth-Davis. Pp. 152. (London: Blackie and Son, Ltd., 1912.) Price 2*s.* net.

IT is difficult to see to what class of readers this book can be of use. The book claims to be "a concise introduction to the subject of plant diseases," and the field surveyed is very wide, fungous and animal parasites and diseases caused by adverse cultural or weather conditions being included. Except in a few instances, as, *e.g.* in the chapters on diseases of coniferous wood and on beet and mangold diseases, little is said on the changes produced by disease in the plant. In some cases the enumeration of the "pests" carries no information at all, *e.g.* in the list of "animal pests" of leguminous plants there is a bare list of nine names. Unfortunately much of the information is given in so vague a manner that the book cannot be recommended as a "primer" for the student, and it does not claim to give the detailed advice as to remedies necessary for the practical grower. One wonders what idea a student would carry away after reading the

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following description (which is unaccompanied by any illustration):—"The *aecidium* is found below the cortex of a stem or the epidermis of a leaf"; and shares his bewilderment on reading, in the paragraph dealing with cultural methods, the sentence:—"Artificial solutions . . . ought to contain the substances present in the diseased specimens."

Although "mykoplasm" is mentioned, no reference is made to the discovery of "specialisation of parasitism" by Eriksson and others. This leads the author wrongly to assume that the hop and pea mildews spread from their numerous wild host-plants to the cultivated plants in question. The view expressed that *Nectria ditissima* is always the secondary and not the primary cause of apple-"canker" was disproved some time ago. By a slip *Fusicladium dendriticum* is stated to attack pears; and it may be pointed out that Alternaria is not an Oomycete, Hypochnus is not an Ascomycete, and that green vitriol is not copper sulphite.

The illustrations are bad, some extraordinarily so—*e.g.* those of corn-mildew, vine-mildew, apple-scab, and Orobanche. The last-named is certainly worthless; six botanists (all familiar with the plant), to whom it was shown by the reviewer, all failed to recognise the plant.

The best we can say is that the descriptions of the various fungi mentioned are clear, and the book is very free from misprints. E. S. S.

Technical School Organisation and Teaching. By C. Hamilton. With a preface by G. Udny Yule. Pp. xii+178. (London: George Routledge and Sons, Ltd., 1913.) Price 2*s.* 6*d.* net.

THE great and rapid changes which have recently taken place in the organisation of technical education in evening schools have (says Mr. Yule) created a demand for a new series of text-books specially adapted to the new circumstances. The present volume is issued as a general introduction to the series. Its aim is to define the proper scope and function of evening school work, to discuss the organisation necessary to make that work effective, and to provide—especially for those who, without previous training or experience, become instructors in evening schools—a simple exposition of the chief principles of teaching. It is evident that the author has excellent qualifications for performing his task. In his introductory section he shows so clear a grasp of the problems of evening school work, so sane a view of its possibilities and of the part it should play in a national scheme of education, that he gains at once the confidence of his readers. The same lucidity, liberality, and practical good sense characterise the subsequent section on the arrangement of courses, the details of administration and the functions of examinations. The final sections show a refreshingly sound appreciation of the principles of method, and much skill in applying them to the special problems of the technical teacher. It is probable that these 120 pages will prove the most helpful and informative part of a thoroughly useful book. T. P. N.

LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. *No notice is taken of anonymous communications.]*

An Attempted Photochemical "Resolution" of Silver.

THE recent correspondence between Prof. Schuster and Mr. Soddy in these columns suggests the placing upon record of a bold but unsuccessful attempt to split up the element silver which I made some years ago with one of my students. In these days, when tentative speculations are figuring so largely in the scientific world for positive knowledge, it may be necessary to point out that the research was prompted by no theoretical views concerning the compound nature of silver. But while there was no special *a priori* reason for suspecting the elemental character of that metal it was well known as a fact that its chloride, &c., on exposure to light only underwent a limited decomposition—*i.e.* that the photo-reduction ceased when a certain minute proportion of "photo-salt" had been formed. The consideration of this property of the silver halides suggested the interpretation (purely hypothetical!) that the "element" contained a constituent (say, α-silver) of which the chloride was sensitive to light, and another (say, β-silver) less sensitive or insensitive to light. From this it followed that if, after exposure and complete saturation with "photo-salt," the unchanged chloride could be separated from the photo-reduction product, the latter, on reconversion into chloride, should furnish a salt very highly sensitive as compared with the main portion of unchanged chloride.

For various reasons the research was never completed, chief among these reasons being the difficulty of effectively separating the minute trace of photo-reduction product from the large excess of unchanged chloride. Notwithstanding our failure, the experiment might be worth repeating under more favourable conditions since the relative sensitiveness to light of two specimens of silver chloride—the hypothetical α and β modifications—could be easily detected and possibly measured. Even if a negative result is obtained it would seem worth the expenditure of time and trouble in order to set at rest the question raised by the hypothesis. Should the result be positive it is needless to point out that the discovery might have important practical bearings upon photographic processes. It may be worth mentioning that in the course of our experiments it was found that a boiling saturated solution of aniline hydrochloride was a good solvent for silver chloride. What is wanted, however, for the present purpose is some inorganic solvent which dissolves the unchanged silver chloride at ordinary temperatures more freely than the metallic chlorides (lithium, &c.) hitherto used for this purpose. Reagents like thiosulphates, cyanides, &c., which form salts with and freely dissolve silver chloride, appear to decompose too much of the "photo-salt" to be of use in such an inquiry. The bearing of the present discussion upon our abortive attempt to "resolve" silver is sufficiently obvious—is the darkening of a silver salt under the influence of light a case of "physical analysis"? R. MELDOLA.

Bournemouth, March 22.

Dana's Proof of Darwin's Theory of Coral Reefs.

IN connection with Prof. Davis's paper on Dana's proof of Darwin's theory of coral reefs, which appeared in NATURE on February 6, it is interesting to point out that land valleys which extend beneath the

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